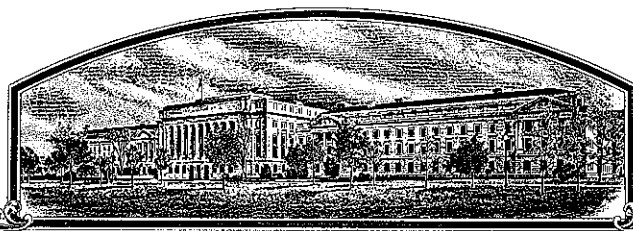


No.

9000115



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**The University of Connecticut**

Whereas, THERE HAS BEEN PRESENTED TO THE  
**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT OF 1942, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

VINCA

'Parasol'

In Testimony Whereof, I have hereunto set  
my hand and caused the seal of the Plant  
Variety Protection Office to be affixed  
at the City of Washington, D.C.  
this 29th day of July in  
the year of our Lord one thousand nine  
hundred and ninety-four.

Attest:

*Kenneth H. Evans*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Mike Esny*  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

## APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) The University of Connecticut		2. TEMPORARY DESIGNATION	3. VARIETY NAME Parasol
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) Research Foundation Box U-133 Room 117 438 Whitney Road Extension Storrs, CT 06268		5. PHONE (Include area code) 203-486-2829	FOR OFFICIAL USE ONLY PVPO NUMBER 9000115
6. GENUS AND SPECIES NAME Catharanthus roseus	7. FAMILY NAME (Botanical) Apocynaceae		FILING DATE Mar. 12, 1990 TIME <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.
8. KIND NAME Vinca	9. DATE OF DETERMINATION August, 1985		AMOUNT FOR FILING \$ 2150. - DATE Feb. 7, 1990
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) University			AMOUNT FOR CERTIFICATE \$ 250. - DATE July 18, 1994
11. IF INCORPORATED, GIVE STATE OF INCORPORATION			12. DATE OF INCORPORATION

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

Blair Winner  
Denholm Seeds  
P.O. Box 1150

PHONE (Include area code): 805-736-4563

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

- a. ☒ Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)  
b. ☒ Exhibit B, Novelty Statement.  
c. ☒ Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.)  
d. ☒ Exhibit D, Additional Description of Variety.  
e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.)

☐ Yes (If "Yes," answer items 16 and 17 below) ☒ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?

☐ Yes ☒ No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?

☐ Foundation ☐ Registered ☐ Certified

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?

☐ Yes (If "Yes," give date)☒ No

19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?

☐ Yes (If "Yes," give names of countries and dates)☒ No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT

DATE

Blair Winner

1/17/90

SIGNATURE OF APPLICANT

DATE

## 14A. Exhibit A: Origin and Breeding History of the Variety

'Parasol' is derived from wild germplasm of Catharanthus rosea and C. trichophyllus originating from the species collection of the breeder. A pedigree breeding system was employed.<sup>1</sup>

A germplasm selection of C. rosea was crossed with C. trichophyllus to produce an F<sub>1</sub> population which, upon selfing, yielded an F<sub>2</sub> population from which the two parental lines ultimately yielding 'Parasol' were selected. Following one generation of selfing and selection for type, these parental lines were crossed to yield an F<sub>1</sub> population from which 'Parasol' was selected. Two generations of selfing and selection were practiced to eliminate offtypes.

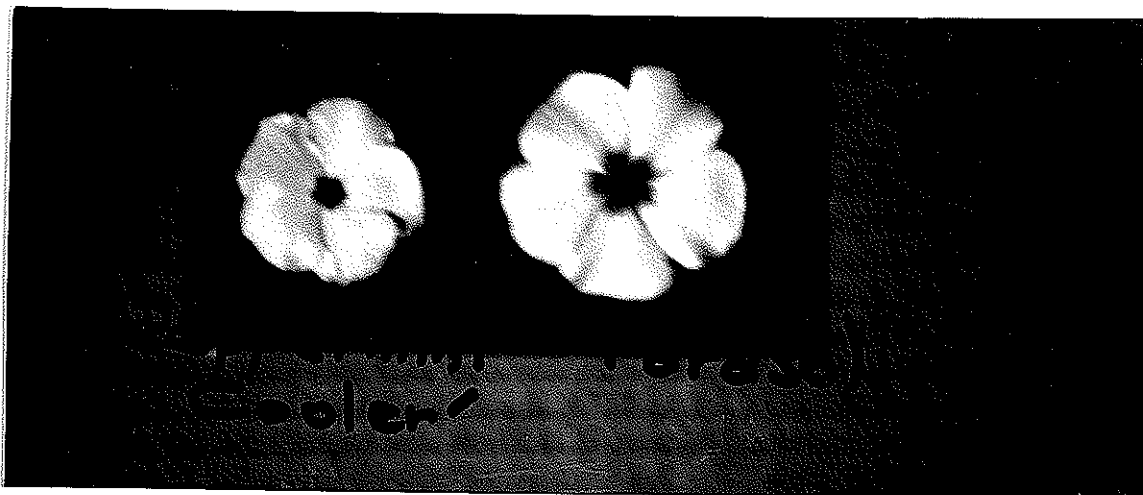
'Parasol' appears stable and uniform after four generations of selfing and during seed increase. Variants are not observed.

from  
applicant's  
1/14/94  
letter  
JMS  
2/4/94

- <sup>1</sup> The species C. trichophyllus was originally collected from southwestern Madagascar, while the C. roseus originated from India.

EXHIBIT B: ESTABLISHING NOVELTY

'Parasol' is most similar to 'Peppermint Cooler.' 'Parasol' differs from 'Peppermint Cooler' by having a larger flower size ('Parasol' has a 4.8 cm diameter vs. 'Peppermint Cooler's 4.2 cm diameter), a larger orifice size ('Parasol' has an orifice size of 1.2 cm diameter vs. 'Peppermint Cooler's .7 diameter), and a more branched plant habit (see photograph). The flower color of 'Parasol' and 'Peppermint Cooler' is the same; White with a small red purple eye (RHS color chart number 57A).



## 14B. Exhibit B: Novelty Statement

'Parasol' is distinguished from other varieties by the size and eye pattern of the corolla as well as the plant habit.

With a limb base of white, 'Parasol' has larger diameter corollas than the white variety(ies) 'Little Bright Eye' and 'Peppermint Cooler' with which it might be compared. 'Parasol' corollas average 5.4 cm in diameter.

However, the most distinctive feature of 'Parasol' and one which most clearly distinguishes it, particularly from 'Peppermint Cooler' is the eye pattern. In opening flowers the proximal 1-2 mm of the limb is very dark in color, R.H.S.C.C. 61B\*, and in fully developed flowers the proximal 5-8mm of each limb are a bright R.H.S.C.C. 57A, collectively forming the eye pattern. The outer margin of the eye is not precisely delineated because of the gradual diffusion of eye pigment into the white limb base, particularly in veinal areas, and this can cause an eye pattern periphery varying from a more general truncate to a less common acute condition. The result is a visible difference in "eye" size, and 'Parasol' has a much larger eye and a much larger flower diameter than its closest comparison 'Peppermint Cooler'.

\*Royal Horticulture Society Colour Chart



6 Flower:      Single      S-double      Double  
                  Shape: Round      Gappy  
                                  (Petals form a      (Petals form a star  
                                  complete circle)      shape.)

                 Form: Flat      Cupped

Orifice color: R.H.S. 57a

Orifice Size : 5-8 mm

(This measurement is taken across the center of the flower including the opening of the corolla tube.)

Ring Color : none

(The Ring is a band of color just outside the orifice.)

Ring Size : none mm

Petal Color : White

Petal Size : 5.4 cm

(Measured as diameter across the orifice.)

Insect Resistance:      None      Not Tested

Disease resistance:      None      Not Tested

Seeds:                      1 None      2 Poor      3 Fair      4 Good

Fragrance:      Flowers: None      Strong

                         Leaves : None      Strong

Habit:                      Height: 48 cm

                                 Width : 48 cm

- All habit sizes, and flower sizes were measured in Elburn, Illinois during the summer while planted outside. Also these sizes represent the plant at maturity.

## 14D. Exhibit D: Additional Description of Variety

Flower diameter averaging 5.4 cm with corolla outline approaching a circle; petal limb base color white; rim of corolla tube orifice approaching R.H.S.C.C. 61B with proximal 1-2 mm of limb bases being similarly pigmented, particularly in newly opened flowers; proximal 5-8 mm of each limb characterized by pigment collectively approximating a bright R.H.S.C.C. 57A and collectively forming a so-called eye pattern; the distal margin of the eye disallows precise delineation due to a gradual diffusion of eye pigment into the white limb base color, particularly in veinal areas of the periphery, and can ultimately vary from a more general truncate to a less common acute condition; petal limbs truncate to rounded, apiculate, more or less equilateral, overlapped, and collectively aligned in the same horizontal plane; apiculas indicate a clockwise phyllotaxy when corolla is viewed from above. Plant height and spread similar, averaging 48 cm at maturity, depending on environmental/cultural factors; leaves elliptic, averaging 2.5 cm wide and 6.5 cm long but varying with the vegetative/reproductive stage and environmental/cultural factors.



## 14E. Exhibit E: Statement of the Basis of the Applicant's Ownership

The variety 'Parasol' for which Plant Variety Protection is hereby sought was developed by Dr. Ronald D. Parker, an employee of the University of Connecticut and faculty member of the Department of Plant Science. By agreement between Dr. Ronald D. Parker and the University of Connecticut all rights to the invention or development were assigned to the University of Connecticut.